



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,038	09/29/2000	Bernhard Dehmer	4481-028	3016

7590 11/12/2002

Lowe Hauptman Gopstein Gilman & Berner LLP  
1700 Diagonal Road Suite 310  
Alexandria, VA 22314

EXAMINER

FOX, JOHN C

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 11/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/67208

Applicant(s)

Examiner

fx

Group Art Unit

3753

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 7/29/02, 12/13/01.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 2-3, 5-11, 14-40 is/are pending in the application.
- Of the above claim(s) 17-21, 29-31 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 2-3, 5-11, 14-16, 22-28, 32-38 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☒ Claim(s) 2-3, 5-11, 14-40 are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 3753

This action is responsive to the Appeal Brief filed July 29, 2002, and further responsive to the amendment of December 13, 2001. The Office Action of January 28, 2002 is withdrawn in favor of the following.

The amendment of April 28, 2002 has been entered.

Claims 1, 4, 12 and 13 have been cancelled.

The drawings are objected to. Figure 2 shows "32" labelling surface 84 rather than the outlet as in Figure 1. Figure 2 also shows "40" as being in outlet 32, which is contrary to the disclosure. A lead line to the "outlet area" is suggested. The delay in making this objection is regretted.

The substitute specification filed December 13, 2001 is objected to for introducing new matter. There is no support in the original specification for the newly labelled surface "80" or for characterizing surface 80 as an opposing shut off surface, or for angle 83 being the angle of surface 80. The original specification already refers to that as projection 86 forming a lip 87. Furthermore, the original specification refers several times to opposing shut off surfaces 84 and 94, meaning that they oppose each other across the chamber 35. Page 5, line 14 of the original specification says "the angle 83 of the first opposing shut-off surface 84".

It is noted that the language of original claim 6 does not provide support for the changes applicant is trying to make.

Art Unit: 3753

According to a USPTO translator, claim 6 corresponds to claim 5 of priority document 199 46 654.8 and "Ventilsitzes (36, 37)" translates as "valve seat (36, 37)". Thus, the claim language "valve seat" collectively designates elements 36 and 37, and the contortions applicant is going through to make the specification fit the roughly translated priority document are unnecessary and unwarranted. Writing good quality claims is a far more constructive solution.

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 2-3, 5-11, 14-16, 39-48, 22-28 and 32-38, drawn to a valve with one inlet and two outlets, classified in Class 137, subclass 625.5.

II. Claims 17-21 and 29-31, drawn to a reciprocating valve, classified in Class 251, subclass 333.

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed in that it is claimed without the recitation of such particulars. The

Art Unit: 3753

subcombination has separate utility such as a shutoff valve for a water line, or the like.

Newly submitted claims 17-21 and 29-31 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: see above.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-21 and 29-31 are withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R. § 1.142(b) and M.P.E.P. § 821.03.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23, 5-11, 14-16, 39-48, 22-28 and 32-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the

Art Unit: 3753

Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 15 and 16 recite the broad recitation "for liquid separation", and the claim also recites "especially for analytical or preparative liquid chromatography" which is the narrower statement of the range/limitation.

Claim 15 recites the limitation "the opposing shut off surfaces of the valve body" in line 7. There is insufficient antecedent basis for this limitation in the claim. This claim is also indefinite because there is no disclosure of shut off surfaces formed on the body, only on the seats 36, 37, and it is unclear if applicant is referring to the seats 36, 37 or not. The subsequent recitation "narrowing conically or as a funnel toward the outlet that opposes the free end of the actuator" is

Art Unit: 3753

inaccurate in that only surface 84 narrows in that manner.  
Surface 94 narrows away from that outlet.

Claim 15 recites the limitation "the outlet that opposes the free end of the actuator" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the annular sealing surface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

The recitation in claim 16, lines 9-10 of "the sealing element assigned to seal the first outlet" is unclear in that it suggests there is more than one sealing element and in that it cannot be determined if this is the same sealing element recited earlier in the claim or a different sealing element. The recitation "rests on opposing shut off surfaces of a valve seat" in lines 10-11 is inaccurate because it rests only on surface 84, not both 84 and 94. The recitation "annular sealing surfaces" in claim 16, line 13 is unclear in that only one annular sealing surface is recited earlier. Claim 16 is indefinite because the term "opposing shut off surfaces" is used for surfaces (newly added) 80 and 84 in lines 10-11 and for surfaces 84 and 94 in lines 12-13.

Claims 22 and 32 are indefinite because they recite both outlets being closed in the second position of the sealing element. Claim 22 recites a sealing pressure for urging the

Art Unit: 3753

sealing element against the lip while at the second position, while claim 32 recites the same feature while at the first position. It is unclear which, if either, recitation is correct.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22-28 and 32-38 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no disclosure in the original specification of a sealing element which closes both outlets simultaneously. There is no disclosure in the original specification of an arrangement in which fluid pressure is supplied for urging the sealing element in both the first and the second positions.

Claims 22-28 and 32-38 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most



Art Unit: 3753

nearly connected, to make and/or use the invention. There is no enabling disclosure of a valve with a sealing element which closes both outlet ports simultaneously. There is no enabling disclosure of how to supply fluid pressure for urging the sealing element in both the first and the second positions.

The action on the merits of the claims hereafter is made to the extent that the claims are understood.

Subject matter in the claims which is indefinite, ie. that is subject to more than one interpretation, is given that interpretation which renders it subject to rejection on the prior art, provided that the issues involved can be reasonably understood. Grammatical and typographical errors and recitations without proper antecedent basis of a minor nature, such as the addition or omission of an adjectival modifier, will be interpreted as if they had been corrected, provided that the correction is reasonably apparent.

Claims which are not treated on their merits hereafter are deemed to be so informal as to preclude a reasonable comparison to the Prior Art in that the meaning of the terms of the claims and thus the content and scope of the claims cannot be determined with a reasonable degree of certainty.

This will be the case where the claims include subject matter which is more seriously indefinite, unclear or inadequately supported. For example, where an indefinite

Art Unit: 3753

recitation is compounded by reference to another indefinite recitation, where there is a multiplicity of indefinite recitations, where there are numerous and repetitive formal errors or where the essential distinguishing feature or features of the invention, ie. the point of novelty, is indefinite, it would require considerable speculation to arrive at a determination of the scope and content of the claim.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15, 2-3, 5-8 and 14 are rejected under 35 U.S.C. §102(b) as being anticipated by Brown. Brown shows a three way/ two position valve with inlet 13 and outlets 14, 15, sealing element 30, 35, 35a, and seats 12a and 12b. 35 and 35a include an arcuate segment. Figure 5 shows an annular sealing area between the seat 12b and sealing element 35a, and the outboard portions of 35 and 35a, which face away from each other, are read as the sealing element shut off surfaces. The upper portion of the annular sealing area of seat 35a is read as "narrowing conically" in that the shape of the seat 35a can be formed by the rotation

Art Unit: 3753

of a conic section about an axis. The upper portion of the annular sealing area of seat 12b is read as two 180° surfaces, opposing the sealing element, if that is what the claim means. The area between seats 12b and 12c is read as an outlet area, and the upper portion of seat 12c is read as a conically narrowing opening surface of an outlet channel. Stem 37 is read as a "tappet valve". The surface of the sealing element 30, 35, 35a is a continuous line, albeit not a straight line. The average angle of the shut off surfaces of 12a and 12b, or of both surfaces of 12b, appears to be about 45°, and larger than 30°.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 16, 39-42 and 47-48 are rejected under 35 U.S.C.

§ 103 as being unpatentable over DE 195 09 145, of record, in view of EP 0 907 045, of record. DE 195 09 145 shows another

Art Unit: 3753

three way/ two position valve having ports A, T, and P, sealing element 5a, 5b, 5c including arcuate segments 5a, 5c, and seats 6, 7 which include steps 6a, 7a at the annular sealing surface. Steps 6a, 7a appear to be at approximately 45° to the actuation axis. The valve stem of EP 0 907 045 is read as a "tappet valve". See Figure 2. The use of A, T, P suggests that DE 195 09 145 is a supply and exhaust valve. EP 0 907 045 is another three way/ two position valve similar to DE 195 09 145 which is configured to divert an inlet 7 between two outlets 8a, 8b. It would have been obvious for one of ordinary skill in the art to have configured the DE 195 09 145 valve as a diverter valve as taught by EP 0 907 045 to desirably use the DE 195 09 145 valve to divert fluid from an inlet between two outlets.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.


Serial Number: 09/672038

-12-

Art Unit: 3753

The Prior Art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Examiner Fox at (703) 308-2595 or John.Fox@uspto.gov. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861. The fax number for Art Unit 3753 is (703) 308-7765. The Supervisory Primary Examiner for Art Unit 3753 is Michael Buiz who can be reached at (703) 308-2580 or at Michael.Buiz@uspto.gov.

  
JOHN FOX  
PRIMARY EXAMINER  
ART UNIT 3753

jcf  
November 10, 2002